

REMARKS

Claims 1, 2, 4-14, and 16-25 are pending in the present application. In the Office Action mailed September 26, 2007, the Examiner rejected claim 25 under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. The Examiner next rejected claims 1, 2, and 10 under 35 U.S.C. §103(a) as being unpatentable over Ookawa (US Pub. 2001/0004211) in view of Laub (USP 6,380,740). Claims 3-6, 9, and 20-25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ookawa in view of Laub, further in view of Mugler, III et al. (USP 5,245,282). Claims 7 and 8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ookawa in view of Laub, further in view of Stephen J. Riederer “Current Technical Development in Magnetic Resonance Imaging”, IEEE Engineering in Medicine and Biology Magazine, September/October 2000 (hereinafter “Riederer”). Claims 11-14, 16, and 18 were rejected under 35 U.S.C. §103(a) as being unpatentable over Mistretta et al. (USP 5,873,825) in view of Ookawa. Claim 15 was rejected under 35 U.S.C. §103(a) as being unpatentable over Mistretta et al. in view of Ookawa, further in view of Mugler, III et al. Claim 17 was rejected under 35 U.S.C. §103(a) as being unpatentable over Mistretta et al. in view of Ookawa, and further in view of Riederer. Claim 19 was rejected under 35 U.S.C. §103(a) as being unpatentable over Mistretta et al. in view of Ookawa, and further in view of Laub.

Claims 3 and 15 have been cancelled by Applicant.

Claim 21 is objected to by the Examiner because of informalities. Applicant has amended claim 21 to correct the typographical error. In light of these corrections, the Applicant requests that the Examiner withdraw the objection to claim 21.

The Examiner rejected claim 25 under 35 U.S.C. §101. The Examiner stated, as the basis for the rejection, that dependent claim 25 “is directed toward a computer program and is non-statutory.” *Office Action*, 9/26/2007, pg. 3. Applicant has amended claim 25 to correct a typographical error and to make the claim consistent with the other similar dependent claims. Applicant respectfully requests that the Examiner withdraw the §101 rejection to claim 25.

Substantively, the Examiner rejected independent claim 1 under 35 U.S.C. §103(a) as being unpatentable over Ookawa in view of Laub. Without conceding to the Examiner’s reasoning regarding Ookawa in view of Laub, Applicant has amended claim 1 to include “playing out a dummy acquisition following each of the magnetic preparation pulses.” The combination of Ookawa in view of Laub cannot be said to teach or suggest such a playing out of a dummy acquisition. In fact, in the rejection to dependent claim 3 (now cancelled), the Examiner admits that “Ookawa in view of Laub fails to teach ‘further comprising the step of playing out at least

one dummy acquisition after application of each magnetic preparation pulse.” *Office Action*, 9/26/2007, pg. 6. The Examiner attempts to remedy this shortcoming by incorporating the Mugler III, et al. reference with the combination of Ookawa in view of Laub. Specifically, the Examiner states that “Mulger (sic) discloses applying a delay after a magnetic preparation pulse in order to achieve a desired contrast within an MR image” and that “[i]t is also well known in the MRI art that dummy acquisitions are effective delay means, which can improve MR signal steady state conditions and reduce image noise.” *Office Action*, 9/26/2007, Pg. 6. However, Mugler III merely discloses that “[t]he MP period can employ (sic) a series of RF pulses, gradiant field pulses, and/or time delays to encode the desired contrast properties in the form of longitudinal magnetization.” *Mugler III*, Col. 2, Lines 9-12. Nowhere does Mugler III explicitly teach or suggest playing out a dummy acquisition following each of the magnetic preparation pulses. Therefore, Ookawa in view of Laub, or any combination therefrom incorporating previously cited references, cannot be said to teach or suggest the step of playing out a dummy acquisition following each of the magnetic preparation pulses. In noting a clear benefit over the prior art, Applicant’s Specification discloses that “implementation of dummy acquisition 74 may greatly improve image quality with the reduction of ghosting artifacts typically associated with steady state effects.” *See Specification*, paragraph [0030]. As such, Applicant believes that claim 1, as amended, is patentably distinct from the art of record and respectfully requests withdrawal of the Examiner’s rejection to claim 1, and all claims depending therefrom.

Next, the Examiner rejected independent claim 11 under 35 U.S.C. §103(a) as being unpatentable over Mistretta et al. in view of Ookawa. Though Applicant respectfully disagrees with the Examiner’s assessment of the art, Applicant has nevertheless amended claim 11 to include the limitation of a computer programmed to “play out a dummy acquisition following each of the magnetic preparation pulses.” As is set forth in further detail above with respect to claim 1, Mistretta et al. in view of Ookawa, or any combination therefrom incorporating previously cited references, cannot be said to teach or suggest the playing out of a dummy acquisition following each of the magnetic preparation pulses. As such, Applicant believes that claim 11, as amended, is patentably distinct from the art of record and respectfully requests withdrawal of the Examiner’s rejection to claim 11, and all claims depending therefrom.

The Examiner also rejected claim 20 under 35 U.S.C. §103(a) as being unpatentable over Ookawa in view of Laub, further in view of Mugler III et al. Again, Applicant has amended claim 20 to include the limitation of a computer caused to “play out a dummy acquisition following each of the magnetic preparation pulses.” As set forth above, Ookawa in view of Laub,

further in view of Mugler III et al. fails to teach or suggest all of the limitations of amended claim 20. In particular, the Mugler III et al. reference merely discloses that “[t]he MP period can employ (sic) a series of RF pulses, gradiant field pulses, and/or time delays to encode the desired contrast properties in the form of longitudinal magnetization.” *Mugler III*, Col. 2, Lines 9-12. Nowhere does Mugler III explicitly teach or suggest playing out a dummy acquisition following each of the magnetic preparation pulses. As such, Applicant believes that claim 20, as amended, is patentably distinct from the art of record and respectfully requests withdrawal of the Examiner’s rejection to claim 20, and all claims depending therefrom.

Therefore, in light of at least the foregoing, Applicant respectfully believes that the present application is in condition for allowance. As a result, Applicant respectfully requests timely issuance of a Notice of Allowance for claims 1, 2, 4-14, and 16-25.

Applicant hereby authorizes charging of Deposit Account No. 07-0845 for any additional fees associated with entering the aforementioned claims.

Applicant appreciates the Examiner’s consideration of these Amendments and Remarks and cordially invites the Examiner to call the undersigned, should the Examiner consider any matters unresolved.

Respectfully submitted,

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General Authorization and Extension of Time

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 07-0845. Should no proper payment be enclosed herewith, as by credit card authorization being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 07-0845. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extensions under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 07-0845. Please consider this a general authorization to charge any fee that is due in this case, if not otherwise timely paid, to Deposit Account No. 07-0845.

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